

A NEW SPECIES OF CHRYSOBOTHRIS (COLEOPTERA) FROM MAINE.

BY C. A. FROST,

SOUTH FRAMINGHAM, MASS.

Chrysobothris verdigripennis, new species.

Form broader and less depressed than *dentipes*, broadest behind the middle, subdepressed; color of punctured spaces of elytra and thorax varying from a verdigris green to brassy or cupreous, costæ and callosities black or very dark bronze, beneath brassy green to coppery; antennæ green, sometimes becoming bronzed toward the tip, joints four to eleven with the lobes reddish testaceous, the testaceous area increasing gradually from the fourth to its maximum on the apical, third joint as long as the next two; front flat, greenish, densely punctured with two small callosities, white pubescence above (♂); or slightly convex, greenish bronze, more coarsely punctured and with two large callosities and many small ones (♀); clypeus broadly and deeply triangularly emarginate, sides nearly truncate; thorax twice as wide as long, generally wider at the base than the apex, arcuately narrowed at the apex, obliquely and slightly at the base, sides at the middle parallel, slightly sinuate, a rather wide median dorsal sulcus generally closed at the base by the joining of the broad slightly elevated lateral callosities, irregular and variable callosities and plicæ at the sides, disk moderately convex; elytra wider than the thorax, widest behind the middle, from apical third narrowed arcuately to the obtuse apices, sides slightly sinuate at middle, margin serrulate, disk moderately convex, sutural costa entire from near the middle, gradually more elevated to apex, second and third costæ indicated by short ridges and callosities joining each other and the first costa, fourth costa distinct to near the humerus but interrupted, depressed places coarsely and very irregularly punctured, with many smooth places, basal foveæ feeble; abdomen beneath sparsely pitted with coarse elongate punctures which are laterally confluent and form crenulate ridges at the sides of the abdomen, sparsely hairy, lateral callosities distinct; metasternum more closely and finely punctate anteriorly; front margin of the prosternum slightly sinuate, sides with coarse punctures and interlacing smooth spaces; anterior femur with a strong, rather obtuse tooth at tip, distal margin indistinctly crenulate; last ventral with serrulate margin. Length 13 to 14 mm.; width at apical third 5.5 to 6 mm.

Male.—Prosternum pubescent, densely, coarsely punctured with a tendency to form rugæ near anterior margin, usually a small smooth space at middle; anterior tibia arcuate, gradually thickened to tip; near the apex there is an acute tooth set obliquely across the inner face of the tibia from the inner posterior edge, the distal edge of this tooth is continued from the base and forms the inner edge of the apical tooth which is slightly back from the front

margin of the tibia; inner front edge of tibia sinuate; middle tibia arcuate, dilated on the inner edge from beyond the middle to the tip, sinuate before the tip; posterior tibia slightly arcuate; last ventral broadly semi-circularly emarginate, last dorsal sparsely and finely punctate, nearly smooth at middle, acutely and deeply emarginate.

Female.—Beneath sparsely hairy, punctuation more coarse; anterior tibia arcuate, gradually thickened to tip, middle very slightly arcuate, slightly thicker at tip, posterior straight; last ventral more densely punctured, emargination rather deep but narrow, ventral callosities more prominent, last dorsal more closely and coarsely punctured, with a slight notch.

This species is very distinct in the peculiar formation of the tooth of the fore tibia which is much more acute and prominent than anything I have seen in this genus. The correct shape of the tooth can only be seen when the tibia is straightened so that the inner face is exposed. The species resembles *dentipes* in the testaceous areas of the outer joints of the antennæ, but are smaller than in that species. The fore tibia is also somewhat similar in *dentipes*, but the strong tooth is lacking on the small oblique ridge of the anterior tibia. The middle tibia is dilated in a similar manner but the dilation is less abrupt in *verdigrispennis*. In sculpture and to a less extent, in form, it resembles *scabripennis* but it is more convex and in bulk nearly twice that species. The majority of the specimens seen were green but my series show a perfect gradation from green to dark bronze.

I have seen two green females in the LeConte collection at Cambridge, one of which, labelled "Me.," is much like the type, and the other, labelled "H. B.," is smaller (12 mm.). There was a green female in the collection of Roland Hayward at Cambridge, placed in the series of *dentipes* and labelled "Me." A green male which was placed in the general collection in the series of *scabripennis*, is probably the specimen referred to by Dr. Horn in his monograph on page 89. It is marked "Ex col. H. G. Hubbard," with no locality. There is also a female specimen in the collection of Frederick Blanchard, taken at Tyngsboro, Mass., July 12, 1896.

Seven males and one female were taken at Wales, Maine, July 23, 1908, in a clearing where large hemlocks were being cut and peeled. There were also many beeches and other hard woods in excess of the hemlocks. The specimens were resting on the trunks of the beeches at the edges of the clearing in the hot sun and were rather difficult to capture.

The following distribution of the specimens has been made: the

type, a green male, in the Museum of Comparative Zoölogy at Cambridge; a male in each of the collections of Mr. Blanchard, Tyngsboro, Mass., Prof. Fall, Pasadena, Cal., and Mr. Gustave Chagnon, Montreal, Can.; the three remaining males and the female are in my collection.

ON CHRYSOBOTHRIS CALIFORNICA AND ALLIES.

BY H. C. FALL,

PASADENA, CAL.

In my List of the Coleoptera of Southern California reference is made to the taking in the San Bernardino Mts. of a specimen of *Chrysobothris californica* from its burrow in the dead twigs of *Pinus ponderosa*. The identification was based on Horn's table and description and seemed satisfactory. A little later a second specimen taken in the same region was identified for me by an eastern specialist as *californica*. The two specimens looked much alike, and the identification was accepted without question. From time to time other specimens were added to my series, until it began to take on a somewhat mixed appearance, and a recent critical examination has convinced me that no less than three distinct species were involved. To determine which was the real *californica* comparison was made this past summer with the LeConte type at Cambridge. Imagine my surprise at finding that neither one of the three was identical with the type. One of my species proved to be *caurina* Horn (not quite typical however), while the other two were new and will be described in the present paper.

Further investigation among the allied species revealed a condition of affairs wholly unexpected. Notwithstanding the deliberate and painstaking work of Horn in his treatment of this genus, errors of such a nature exist in the table and descriptions of certain species in this part of Group IV as to make it quite impossible for the student correctly to identify his material thereby. Three species are involved in these errors, which are briefly as follows: